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Social media in the era of COVID-19

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SOCIAL MEDIA IN THE ERA OF THE UNKNOWN

The SARS-CoV-2, COVID-19 pandemic has been likened to a war-like state against an invisible enemy in which healthcare workers (HCW) are metaphorical frontline soldiers, overwhelmed by patient numbers, ventilator shortages and rationing of personal protective equipment (PPE). Little was initially known about the virus, its clinical course, treatment strategies or how to organise healthcare systems to meet this challenge.

Over the last few years, social media (SoMe) platforms have gradually gained popularity in cardiology as a means of sharing clinical experiences, disseminating new knowledge, curating content, research collaborations and patient advocacy.[1] The cardiology community faces many challenges in the COVID-19 pandemic: patients with cardiovascular disease have the greatest risk of mortality with COVID-19 infection, up to 28% of COVID-19 cases have cardiovascular involvement, cardiac complications of potential drugs under investigation and delayed cardiac care for patients not presenting to hospitals for fear of being exposed to COVID-19[2–5] Furthermore, provision of cardiovascular care places HCW at elevated risk of serving as a host or vector of viral transmission.[3] During this pandemic, SoMe platforms are well poised to meet many of the challenges faced by the cardiovascular community owing to their ability to facilitate the hosting of multimedia content, global reach and providing the means for real-time interactions. They have played a pivotal role in creating a sense of comradery, disseminating knowledge, recruitment and collaboration for research, coordinating a response, and advocacy pertaining to COVID-19. (figure 1)

CREATING SHARED COMMITMENT AND SENSE OF COMRADERY

At the onset of the pandemic, HCW struggled to reconcile their professional commitment to provision of healthcare to the sickest patients in the face of personal danger, limited clinical resources and frustration over inadequate PPEs. While intense emotions of dealing with life and death are not new for cardiologists, the pandemic adds additional stressors of inadequate supplies, risk to life, the need to maintain physical distance from their families, while providing emotional support to patients due to no visitor policies. There are anxieties about being deployed into environments that are unfamiliar, working beyond areas of expertise and comfort zone. These unique stressors may not be appreciated by those outside of medicine. Additionally, many HCW were reluctant to share these sentiments within their hospitals for fear of judgement by colleagues, or conflict with their administration. HCW of different demographics and cultures in separate continents experience the same challenges, frustrations and fears, and have been brought together and empowered by SoMe in unprecedented ways. HCW feel comfortable candidly voicing their experiences, frustrations and opinions on SoMe. Some do so in closed forums through web-based meetings and chat forums by invitation only; others through public outlets such as Twitter and Facebook. HCW collectively devised potential solutions to overcome the risk of exposing their families. A Facebook group called 'RVs 4 MDs' facilitated American HCW to rent recreational vehicles to self-isolate outside their homes.[6] Through SoMe, the traditional support network of an individual's friends, families and work colleagues was expanded to include a global network of frontline staff experiencing similar challenges and sentiments. Validation of frustrations and recognition that these stressors are uniformly shared across the world is empowering. Collectively uplifting each other from afar, they shared global videos of public singing and applauding of HCW, motivational quotes and images, and success stories of patients' recovering.

During World War I, the term 'happy hour' was coined to denote time blocks on ships where sailors could engage in relaxing activities to shield themselves from drudgeries of war.[7] A century later, unable to entertain in person due to the social distancing restraints,

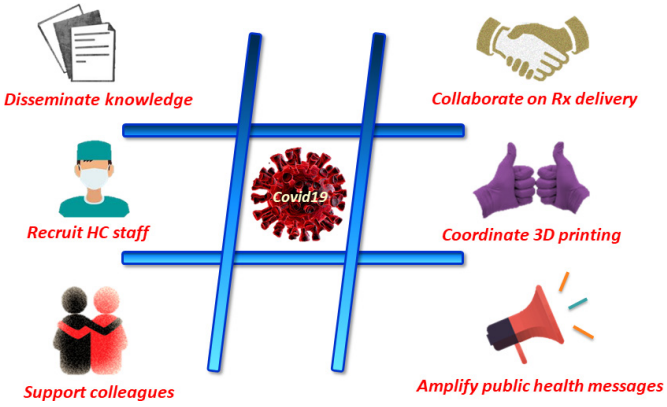

Figure 1 Role of social media during the COVID-19 pandemic. HC, healthcare; RX, treatment.

clinicians have adapted the same euphuism on SoMe platforms to create a surge of 'virtual happy hours' and 'COVID-19-free zones' where people go to decompress, a form of momentary escapism from the pandemic. These sessions have created unique bonds reigniting the spirit of siblinghood among cardiologists and with other clinicians.

EDUCATION

The biggest challenge encountered by clinicians during the COVID-19 pandemic was their limited experience in dealing with such a pandemic, compounded by the limited evidence base with no guidelines or textbooks to reference around optimal treatment strategies, management and clinical outcomes. This made it pivotal to rapidly learn from each other's experiences across the world, and also find a means to rapidly disseminate new institutional policies and guidelines, particularly as cardiologists got deployed into unfamiliar clinical environments including emergency rooms and intensive care units. HCW quickly shared their clinical cases, research and management strategies through multimedia content including tweets, tutorials, webinars and infographics, sharing educational resources in real time beyond the silos of subspecialties across the globe. Clinicians promptly shared their experiences regarding thrombotic manifestations of COVID-19, risk stratification with D-dimer, treatment consideration in patients on ACE inhibitors, cardiac toxicities associated with hydroxychloroquine, and management of acute coronary syndromes in patients with COVID-19, and particularly how to differentiate myocarditis associated with COVID-19 infection from ST elevation myocardial infarction.[8–10] Cardiologists worldwide collectively contributed to the plethora of clinical cases highlighting the cardiac imaging findings of COVID-19, thereby resulting in a remarkable array of knowledge, as well as cath lab protocols for the management of ACS cases.[11] SoMe was advantaged over the traditional venues for communication namely emails, conference call, departmental meetings and grand rounds by its speed, virtual interface and freedom from geographical and specialty boundaries. Intersocietal guidelines and consensus statements were created on cardiac manifestation and management of COVID-19, and protocols for performing cardiopulmonary resuscitation, coronary angiography, electrophysiology procedures and cardiac imaging during the health crisis.[12–15] While still published by traditional journals and highlighted by webinars, the power of SoMe was harnessed to facilitate rapid dissemination of these guidelines by hashtags, tweetorials, WhatsApp groups and Instagram feeds. Through SoMe, individual minds and experiences convalesced together into a unified and formidable knowledge bank at an unprecedented pace.

RECRUITMENT AND CULTIVATION OF RESEARCH

During the pandemic, SoMe served as a powerful tool to advertise, recruit and collaborate on various research endeavours. SoMe allowed for development of collaborative networks globally among cardiologists with shared interests, who may have never met. For example, global acute coronary syndrome COVID-19 registries have been developed and shared over SoMe.[16] Additionally, many clinical trials advertised on SoMe for widespread reach to potential study participants. For instance, there were calls to donate convalescent serum from recovered patients for the ongoing trial at multiple institutions.[17] The ColCorona trial, a multicentre study to study the efficacy of colchicine in patients infected with COVID-19 recruited through SoMe.[18] Similarly, the American Heart Association also announced the launch of a novel registry to organise and aggregate COVID-19 cases to better elucidate risk factor profiles and treatment algorithms on Twitter.[19]

Additionally, influencers on SoMe served as facilitators to deliver investigational drugs to sick patients. For example, through Twitter, an influential cardiologist reached out to thousands of followers, and was able to expedite delivery of remdesivir to a COVID-19 patient within 6 hours of his tweet.[20] SoMe was also instrumental in rapid sharing of published studies in journals and preprinted manuscripts from websites such as MedRXIV.org to to exponentially improve their reach.

A CALL TO ACTION AND COORDINATION

The COVID-19 pandemic has overwhelmed healthcare systems across the globe, with infection of HCW resulting in staffing crises that compound the challenges of treating unprecedented numbers of patients. SoMe has served as an important platform to drive the recruitment of current and retired HCW to meet this staffing crisis. After calls on SoMe, HCW from different parts of Italy flew to Lombardy to assist, retired clinicians volunteered to rejoin the work force in Illinois, New York and United Kingdom, and those unable to travel helped through telemedicine. Additionally, early adopters of telehealth shared their initial experiences and guidance on coding and optimisation through roundtables, webinars and

tweets on SoMe platforms as many cardiologists shifted their outpatient practices to seeing patients virtually during the period of lock down.[21]

Furthermore, several SoMe outlets were used to connect healthcare centres to people with engineering and 3D printing resources and expertise to temporarily overcome global shortages of medical equipment and PPEs particularly in Europe and USA.[22] Automakers partnered with bioprinting sectors to produce ventilators and Bipap machines, and other in-demand medical equipment. Similarly, digital manufactures mass produced ventilator valves and connectors to allow multiple patients to be connected to one ventilator, and nasal swabs for testing in response to call from hospitals. Twitter hashtags #GetMePPE and #GetUsPPE have helped raise visibility of the dire PPE shortages. Technology pioneers and manufactures collaborated via SoMe to bioprint face masks, safety goggles, block shields that can be used as protection during intubation, hands-free door handle attachments, and wrist claps to hold sanitizer bottles for easy access, as stop gap measures to decrease transmission while traditional manufacturers ramp up production.[22]

PUBLIC EDUCATION AND ADVOCACY

In the absence of evidence-based therapies and vaccination programmes to eradicate COVID-19, an effective strategy that limits the spread of COVID-19 remains prevention via social distancing, and rigorous handwashing. Traditional venues of public education such as advertisement on billboards, circulation of flyers and dissemination through faith-based organisations were hampered by the physical distancing restrictions. In contrast, SoMe platforms provided the means to amplify such public health messages through posts, tweets, videos and infographics urging the public to maintain good hand hygiene, not touch their face, avoid crowds and stay home. Many cardiologists reverted to SoMe platforms to educate both the public and physicians on cardiac risks of taking hydroxychloroquine.[9] Similarly, many cardiologists highlighted the perils of staying home following a myocardial infarction, and shared the CardioSmart infographics with their Twitter followers.[23]

Advocacy groups were no longer constraint by their individual subspecialties, and instead cardiology groups joined forces with other specialty advocacy groups to campaign for common goals. SoMe platforms encouraged clinicians to share stories and sign letters to lawmakers advocating for improved access to PPEs, increase rapid widespread testing for COVID-19, reduce reimbursement barriers to telehealth and petitions to improve care for mental health.

In conclusion, SoMe, augmented the traditional venues of communication, and served as a successful means to curate and disseminate knowledge, empower HCW into action, facilitate recruitment, foster collaboration and facilitate advocacy virtually across the global sphere in real time.

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